

# IMPORTANT TOPICS FOR NEST EXAM

1. Diversity in organisms: Examples and characteristics of every phylum of every kingdom, phylogenetic tree.
2. Cell biology: Process of cell division, important functions of cell organelles.
3. Plant physiology: cyclic and noncyclic photophosphorylation, oxidative phosphorylation, ETS(Both for respiration and photosynthesis), C3 and C4 cycle, chemical composition, functions and little bit knowledge of signalling pathways of every phytohormone.
4. Animal physiology: Nerve impulse production and conduction, sensory systems(eye,ear), cardiac cycle and ECG, oxygen-haemoglobin dissociation curve, Joints of our body and muscle contraction, Secretion and function of every endocrine hormone and their mechanism of action, enzymatic digestion process.
5. Reproduction: Gametogenesis in animals and plants, mega and microsporogenesis, menstrual cycle, Assisted reproductive techniques, contraceptive methods, double fertilisation in plants, apomixis and polyembryony.
6. Genetics: Exceptions of Mendel's law of inheritance(incomplete and codominance), Linkage, Mendelian and chromosomal disorders.
7. Molecular biology: Chargaff's rule, Process of Replication, transcription and translation, genetic code and lac operon.
8. Evolution: Natural selection, homologous and analogous organs, Hardy-weinberg principle, adaptive radiation.
9. Biotechnology: Selectable markers, Restriction enzymes, process of formation of recombinant plasmid, recombinant insulin formation, RNA interference.
10. Ecology: Exponential and logistic growth curves, Adaptations of regulators, Biotic interactions, pyramids of number, biomass and energy, productivity and decomposition, food chain, latitudinal gradients in biodiversity, Species-area relationship, Causes of biodiversity loss.

Not to miss at any cost	Topics
Evolution linked with diversity	Hardy-weinberg principle,Phylogeny, forms of natural selection
Ecology	Biotic interactions, Growth curves(Exponential and logistic)
Photosynthesis	C3 and C4 cycles, cyclic, non-cyclic and oxidative phosphorylations
Genetics	Numerical questions of probability from Mendelian disorders, linkage
Molecular biology	Lac operon, questions on complementarity of bases in the nucleic acids
Neural control and coordination	Action potential generation and conduction
Biotechnology	Recombinant plasmid formation and it's selection via antibiotic resistance and chromogenic substrates.

Can be missed
Microbes in human welfare
The living world
Strategies for improvement of plant resources
Animal morphology and anatomy

## IMPORTANT TOPICS FOR IAT EXAM

All the factual information should be on your tips before going for examination.

1. Diversity in organisms: Examples and characteristics of every phylum of every kingdom.
2. Morphology: all the definitions and examples of each and every topic of ncert.
3. Cell biology: Process of cell division, cell membrane, active-passive transport, important functions of cell organelles.
4. Plant physiology: cyclic and noncyclic photophosphorylation, oxidative phosphorylation, ETS(Both for respiration and photosynthesis), C3 and C4 cycle, chemical composition and function of each phytohormone.
5. Animal physiology: Nerve impulse production and conduction, sensory systems(eye,ear), cardiac cycle and ECG, oxygen-haemoglobin dissociation curve, Joints of our body and muscle contraction, Secretion and function of every endocrine hormone and their mechanism of action, enzymatic digestion process.
6. Reproduction: Gametogenesis in animals and plants, mega and microsporogenesis, menstrual cycle, Assisted reproductive techniques, contraceptive methods, double fertilisation in plants, apomixis and polyembryony.
7. Genetics: Exceptions of Mendel's law of inheritance(incomplete and codominance), Linkage, Mendelian and chromosomal disorders, pedigree analysis.
8. Molecular biology: Chargaff's rule, Process of Replication, transcription and translation, genetic code and lac operon.
9. Evolution: Natural selection, homologous and analogous organs, Hardy-weinberg principle, adaptive radiation.
10. Biotechnology: Selectable markers, Restriction enzymes, process of formation of recombinant plasmid, recombinant insulin formation, RNA interference.
11. Ecology: Exponential and logistic growth curves, Adaptations of regulators, Biotic interactions, pyramids of number, biomass and energy, productivity and decomposition, food chain, latitudinal gradients in biodiversity, Species-area relationship, Causes of biodiversity loss.

Not to miss at any cost	Topics
Evolution	Hardy-weinberg principle, forms of natural selection, adaptive radiation, homologous and analogous organs
Ecology	Biotic interactions, Growth curves(Exponential and logistic)
Photosynthesis	C3 and C4 cycles, cyclic, non-cyclic and oxidative phosphorylations
Genetics	Numerical questions of probability from Mendelian disorders, linkage, Mendelian and chromosomal disorders
Molecular biology	Lac operon, questions on complementarity of bases in the nucleic acids
Neural control and coordination	Action potential generation and conduction
Biotechnology	Recombinant plasmid formation and it's selection via antibiotic resistance and chromogenic substrates.

Can be missed(but factual information should be remembered by these chapters)
Microbes in human welfare
The living world
Strategies for improvement of plant resources
Animal morphology and anatomy